

AMENDMENTS TO THE SPECIFICATION

Please delete paragraph [0016] and replace it with the following amended paragraph [0016]:

[0016] Using digital frames, the system 10 applies a specific ~~zooming~~ scale factor to each horizontal line of pixels. The system 10 uses graded zooming, continuously increasing the scale factor from bottom to top, causing figures in the far field to appear much closer. The large pixel arrays currently available through digital photography and video make over-sampling possible with no visible scene degradation.

Please delete paragraph [0017] and replace it with the following amended paragraph:

[0017] The number of pixels used in each horizontal line of pixels is constant, however the ~~rate of over-sampling of pixels is reduced~~ graded zooming continuously increases the scale factor from bottom to top according to a scale factor. For instance, if the view at the top of a sample picture ~~is zoomed to 2X~~ has an increasing scale factor of that of the bottom of the sample picture, the bottom line ~~is over-sampled at a rate of 2~~ remains the same, while the top line is ~~not over-sampled at all~~ stretched.

Please delete paragraph [0019] and replace it with the following amended paragraph [0019]:

[0019] The system 10 is illustrated utilizing zooming in one dimension only. It is to be understood that zooming in other dimensions is available and is included in other embodiments. Referring again to FIG. 1, the figure will be used to describe another embodiment of a system constructed in accordance with the

present invention. Pictures are two-dimensional and simply applying Equation 1 to the horizontal lines would result in images that appear stretched horizontally. In this embodiment a similar equation is applied in the vertical dimension resulting in images with correct aspect ratios. Each successive line from side to side is over-sampled by the following equation:

$$S = 1 + (Z_t - Z_b)(N-n)/N \quad \text{(Equation 1)}$$

Please delete paragraph [0020] and replace it with the following amended paragraph [0020]:

[0020] Where S is the rate of over-sampling, N is the number of vertical lines of pixels, n is the vertical line of pixels number counting from one side to the other side, Z_t is the zoom ratio at the one side of the sample picture, and Z_b is the zoom ratio at the other side of the sample picture. Applying Equation 1 in the vertical direction results in ~~skipping lines~~ images that appear stretched vertically.

Please delete paragraph [0028] and replace it with the following amended paragraph [0028]:

[0028] This embodiment of the present invention can be best demonstrated zooming in one dimension only. The number of pixels used in each horizontal line of pixels is constant; however, the rate of over-sampling of pixels is reduced from bottom to top according to the scale factor. For instance, if the view at the top of the picture is zoomed to 2X of that of the bottom of the picture, the bottom line is over-sampled at a rate of 2, while the top line is not over-sampled at all. In one possible implementation, each successive line from bottom to top is over-sampled by ~~the following equation~~ Equation 1 which is repeated below:

$$S = 1 + (Z_t - Z_b)(N-n)/N \quad \text{(Equation 1)}$$

Where S is the rate of over-sampling, N is the number of horizontal lines, n is the horizontal line number counting from bottom to top, Z_t is the zoom ratio at the top of the picture, and Z_b is the zoom ratio at the bottom of the picture.

Pictures, however, are two-dimensional and simply applying Equation 1 to the horizontal lines would result in images that appear stretched horizontally.

Applying a similar equation in the vertical dimension results images with correct aspect ratios. Applying Equation 1 in the vertical direction results in ~~skipping lines~~ images that appear stretched vertically.

Please delete paragraph [0030] and replace it with the following amended paragraph [0030]:

[0030] The pixel maps 40 and 50, in FIGS. 4 and 5, explain how pixels might be sampled if they are over-sampled using graded zooming. The same ~~number of pixels are view is~~ present in both pixel map 40 and pixel map 50. FIG. 4 illustrates how continuously increasing a scale factor from bottom to top can ~~isolate~~ stretch the set of darker colored pixels 42. If the lighter colored pixels 41 are then ~~removed~~ reduce from the pixel map 40, leaving ~~only~~ the stretched set of darker colored pixels 42, a new pixel map can be produced. The new pixel map is represented by the pixel map 50 shown in FIG. 5.